

## ABSTRACT

A circuit for generating a component of  $n$ -th order includes: six differential amplifiers (15A to 15F) having a pair of input terminals supplied with a common linear input signal and a constant level signal of a predetermined level, outputting a reversed or non-reversed signal to the linear input signal, and having a limiter function to limit the output signal to a predetermined maximum value and a minimum value; a constant level signal generation circuit for supplying the constant level signal to each of the six differential amplifiers; a current mirror circuit (14) for controlling current flowing in the differential amplifiers (15A to 15F); and addition resistors (16A, 16B) for adding the output current of the differential amplifiers (15A to 15F). By increasing the flowing current by the sixth differential amplifier (15F) so as to increase the resistance value, it is possible to obtain a highly accurate output current of a component of a 5-th order function having more precipitous inclination with respect to the input signal.

(12)特許協力条約に基づいて公開された国際出願

(19) 世界知的所有権機関  
国際事務局(43) 国際公開日  
2004 年 3 月 25 日 (25.03.2004)

PCT

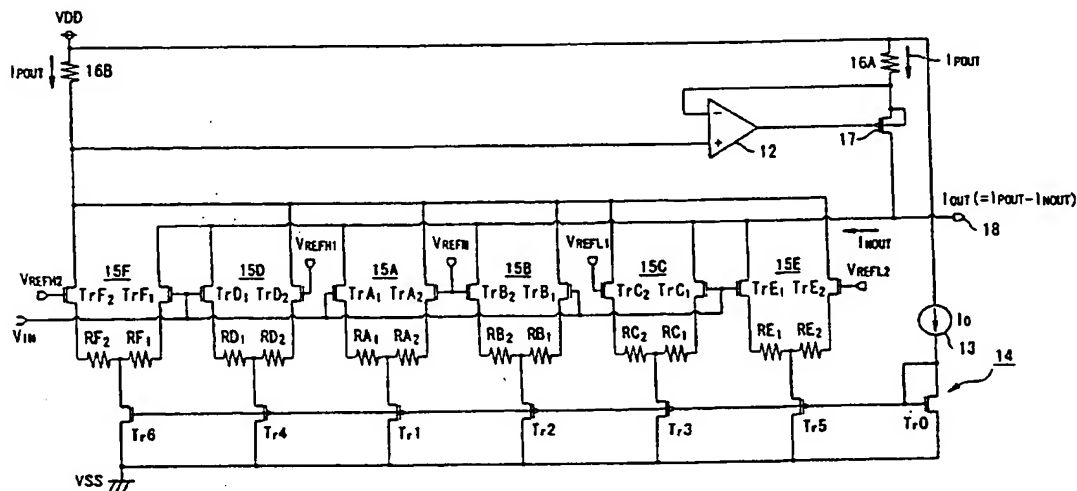
(10) 国際公開番号  
WO 2004/025824 A1

- (51) 国際特許分類<sup>7</sup>: H03B 5/32, G06G 7/20 (72) 発明者; および  
(21) 国際出願番号: PCT/JP2003/010853 (75) 発明者/出願人 (米国についてのみ): 川崎 蒼子  
(22) 国際出願日: 2003 年 8 月 27 日 (27.08.2003) (KAWASAKI, Takako) [JP/JP]; 〒243-0004 神奈川県  
(25) 国際出願の言語: 日本語 厚木市 水引 1-1 2-2 0-1 0 3 Kanagawa (JP). 根  
(26) 国際公開の言語: 日本語 本 謙治 (NEMOTO, Kenji) [JP/JP]; 〒228-0804 神奈川  
(30) 優先権データ: 特願2002-248932 2002 年 8 月 28 日 (28.08.2002) JP 県 相模原市 旭町 2 2-1 0 Kanagawa (JP).  
(71) 出願人 (米国を除く全ての指定国について): 旭化 (74) 代理人: 森 哲也, 外 (MORI, Tetsuya et al.); 〒101-0032  
成マイクロシステム株式会社 (ASAHI KASEI MI- 東京都千代田区岩本町二丁目3番3号 友泉岩本町  
CROSYSTEMS CO., LTD.) [JP/JP]; 〒163-1031 東京都 ビル 8 階 日栄国際特許事務所 Tokyo (JP).  
新宿区 西新宿三丁目 7 番 1 号 Tokyo (JP). (81) 指定国 (国内): AE, AG, AL, AM, AT, AU, AZ, BA, BB,  
BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,  
ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI,  
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG,

[続葉有]

(54) Title: DEVICE FOR GENERATING FUNCTION OF APPROXIMATE n-TH DEGREE AND TEMPERATURE COMPEN-  
SATION QUARTZ OSCILLATION CIRCUIT

(54) 発明の名称: 近似 n 次関数発生装置及び温度補償水晶発振回路



(57) Abstract: A circuit for generating a component of n-th degree includes: six differential amplifiers (15A to 15F) having a pair of input terminals supplied with a common linear input signal and a constant level signal of a predetermined level, outputting a reversed or non-reversed signal to the linear input signal, and having a limiter function to limit the output signal to a predetermined maximum value and a minimum value; a constant level signal generation circuit for supplying the constant level signal to each of the six differential amplifiers; a current mirror circuit (14) for controlling current flowing in the differential amplifiers (15A to 15F); and addition resistors (16A, 16B) for adding the output current of the differential amplifiers (15A to 15F). By increasing the flowing current by the sixth differential amplifier (15F) so as to increase the resistance value, it is possible to obtain a highly accurate output current of a component of a 5-th degree function having more precipitous inclination with respect to the input signal.

(57) 要約: 対の入力端子に共通の 1 次の入力信号及び所定レベルの定レベル信号が個別に入力され、前記 1 次の入力信号に対して反転又は非反転信号を出力すると共に、出力信号を所定の最大値及び最小値で制限するリミッタ機能を有する複数 6 個の差動増幅器 15A ~

[続葉有]

WO 2004/025824 A1